

## CLAIMS

We claim:

1. A portable wireless self-contained signal transceiver comprising:

a) at least one directional antenna capable of both transmitting and receiving signals;

b) a robotic antenna-pointing system configured to point the at least one directional antenna at a desired communications target;

c) control communications means for accepting remote instructions from a user;

d) at least one antenna with corresponding electronics package and signal processing and signal transformation computing capability; and

e) a local power supply.

2. The signal transceiver of Claim 1 in which the robotic antenna-pointing system additionally comprises a self-locating subsystem and a self-leveling subsystem.

3. The signal transceiver of Claim 2 in which the robotic antenna-pointing system additionally comprises a subsystem for locating a target satellite antenna using system location data and the ephemeris or ephemerides of at least one target satellite antenna.

4. The signal transceiver of Claim 2 in which the robotic antenna-pointing system self-locating subsystem comprises a receiver for location information received from a system selected from the group GPS and GLONASS.

5. The signal transceiver of Claim 1 in which the at least one antenna with corresponding

electronics package and signal processing and signal transformation computing capability is selected from a group of types of at least one antenna with corresponding electronics package and signal processing and signal transformation computing capability consisting of RF, analog, digital, modulated voice, picture, and data.

5

6. A portable wireless self-contained signal transceiver comprising:

- a) a lower assembly;
- b) an upper assembly; and
- c) a power supply.

10

7. The portable wireless self-contained signal transceiver of Claim 6 in which the lower assembly comprises:

- a) a turntable;
- b) an azimuth motor;
- c) an elevation motor;
- d) an elevation gear reducer;
- e) an absolute position encoder;
- f) a commutating rotary connector;
- g) a stow sensor; and
- h) a docking control board module.

15

20

8. The portable wireless self-contained signal transceiver of Claim 6 in which the upper assembly comprises:

- a) at least one antenna element;
- b) an inclinometer;
- 5 c) a magnetometer;
- d) a skew motor;
- e) at least one communications protocol support device; and
- f) an RF remote control receiver.

10 9. The portable wireless self-contained signal transceiver of Claim 6 additionally comprising a server computer.

10. The portable wireless self-contained signal transceiver of Claim 6 in which the server computer is a PC.

15 11. The portable wireless self-contained signal transceiver of Claim 6 additionally comprising an operating system that controls the deployment and pointing of the portable wireless self-contained signal transceiver.

20 12. The operating system of Claim 11 additionally comprising a TCP/IP listener.

13. The operating system of Claim 11 additionally comprising a GPS subsystem.